



United States
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Service

Shasta-Trinity
National Forests

Lat 40.92172 Lon -122.13841

Reply To: 3420

Date: September 18, 1992

Subject: Biological Evaluation of Pest Concerns on a Silvicultural
Recertification Stand, Shasta Lake Ranger District (FPM Report N92-7)

To: Forest Supervisor, Shasta-Trinity NF

On August 28, 1992, FPM personnel Gregg DeNitto, Linda Haugen, and Dave Schultz accompanied Bill Rametes of the Shasta Lake RD on a visit to a stand in the Reynolds Basin (T. 35 N., R. 2 W., section 6). A silvicultural prescription is being prepared for this stand as a part of Bill Rametes' silvicultural recertification. The 3 acre mixed conifer stand is to be part of the Reynolds Basin Small Green Sale. An adjacent unit is part of the Reynolds Basin Timber Sale. The Draft Forest Plan direction for this area is prescription 8, General Forest.

The recertification stand includes a ridge and a dry southeast slope. The stand was salvage logged prior to 1970, then harvested again in 1975. The stand is currently overstocked. It is a 2 to 3 layered stand, with a 200-250 year old scattered overstory layer, a layer of small sawtimber size trees, and a layer of saplings and small poles. There is a significant component of sugar pine in all size classes on the site. There are also large amounts of ponderosa pine, Douglas-fir, and California black oak. The major disease organisms are white pine blister rust (caused by Cronartium ribicola) on the sugar pine and dwarf mistletoe (Arceuthobium campylopodum) on the ponderosa pine. The activity of other pathogens and insects was evident, but these appeared to be secondary to the effects of drought stress and overstocking.

The suggested silvicultural prescription for this stand is to select against ponderosa pine to eliminate dwarf mistletoe, regenerate any small openings with a species mix, and save as much sugar pine as possible while maintaining a more appropriate stocking level for the site and stand age. A multi-layered, mixed species stand is desired in the long-term.

PEST CONDITIONS

The current level of white pine blister rust (WPBR) in the stand is low. Bole cankers caused by the fungus were identified on a few saplings. Most of the trees are not infected, however. Uredia and telia were observed on Ribes leaves in the vicinity, but not in the stand. Some Ribes plants are present in the stand, but mainly where the canopy is more open. Current Regional direction is to harvest apparently rust-free sugar pine only if essential to meet stand management objectives (Regional Forester's memo 2410/2470, October 19, 1990).

There is a high level of dwarf mistletoe in the ponderosa pine. Levels in individual trees range from one to a few infected lower branches to infections





In the remainder of the stand are overstory dwarf mistletoe infected ponderosa pines that are a continual threat to any pines beneath them. Most of the pines in the second layer of the stand are infected also. Because of the desire to regenerate small openings that will occur in the stand with ponderosa pine as well as other species, removal of these overstory trees would be beneficial to protecting the regeneration from infection.

Slash from any species of pine which is over 3 inches in diameter has a fairly high probability of being infested by Ips paraconfusus in the Reynolds Basin. If large numbers of Ips paraconfusus build up in pine slash, it could cause mortality of ponderosa or sugar pine in the immediate vicinity. Entire trees up to about 10 inches DBH, as well as the tops of larger trees can be killed. The use of pine slash for breeding by Ips paraconfusus can be reduced, or prevented by timely slash treatment. This beetle can complete its development in a little over 6 weeks, so slash treatments must be completed soon after cutting to be effective. The treatment which is most commonly used in commercial timber sales is to lop the larger slash and scatter it in sunny areas. More extensive, and more costly slash treatments, such as complete removal or chipping are occasionally used in campgrounds or other high value sites. Two situations which should be avoided are piling or decking larger pine slash which will not be burned or removed within 6 weeks, and also allowing green pine slash to rest on a pine leave tree.

This stand provides significant diversity because of the large number of sugar pines in a range of size classes. These should be retained as much as possible. To reduce the chance for an increase in blister rust in this stand following any management activities, several actions are recommended. First, limit Ribes regeneration by minimizing duff disturbance and the size of openings. Second, reduce the target area on sugar pine by pruning the lower limbs.

If there are any questions about this evaluation or additional assistance is required, contact FPM in the S.O.

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